

EPA-81

Alex Barron/DC/USEPA/US

07/08/2011 09:01 AM

To "Joel Beauvais", Michael Goo

cc

bcc

Subject Resource adequacy

Sam Napolitano

----- Original Message -----

From: Sam Napolitano

Sent: 07/08/2011 08:08 AM EDT

To: "Mignone, Bryan" <Bryan.Mignone@hq.doe.gov>

Cc: William Meroney; Alex Barron; Peter Tsirigotis

Bryan:

(b)(5) (DPP) [Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Sam



ParsedFile_Toxs_2015Base.xlsx



ParsedFile_Toxs_2015Policy.xlsx

EPA-323

Alex Barron/DC/USEPA/US

06/25/2012 12:22 PM

To: Brendan Gilfillan

cc: Laura Vaught, Michael Goo, Arvin Ganesan, Joseph Goffman, Joel Beauvais

bcc:

Subject: Re: Fw: EIA's Annual Energy Outlook

FYI - AEO2012 just went live today. I'm reviewing now.

Power generation from renewables and natural gas continues to increase

In the Reference case, the natural gas share of electric power generation increases from 24 percent in 2010 to 28 percent in 2035, while the renewables share grows from 10 percent to 15 percent. In contrast, the share of generation from coal-fired power plants declines. The historical reliance on coal-fired power plants in the U.S. electric power sector has begun to wane in recent years.

Over the next 25 years, the share of electricity generation from coal falls to 38 percent, well below the 48-percent share seen as recently as 2008, due to slow growth in electricity demand, increased competition from natural gas and renewable generation, and the need to comply with new environmental regulations. Although the current trend toward increased use of natural gas and renewables appears fairly robust, there is uncertainty about the factors influencing the fuel mix for electricity generation. *AEO2012* includes several cases examining the impacts on coal-fired plant generation and retirements resulting from different paths for electricity demand growth, coal and natural gas prices, and compliance with upcoming environmental rules. While the Reference case projects 49 gigawatts of coal-fired generation retirements over the 2011 to 2035 period, nearly all of which occurs over the next 5 years, the range for cumulative retirements of coal-fired power plants over the projection period varies considerably across the alternative cases (Figure 5), from a low of 34 gigawatts (11 percent of the coal-fired generator fleet) to a high of 70 gigawatts (22 percent of the fleet). The high end of the range is based on much lower natural gas prices than those assumed in the Reference case; the lower end of the range is based on stronger economic growth, leading to stronger growth in electricity demand and higher natural gas prices. Other alternative cases, with varying assumptions about coal prices and the length of the period over which environmental compliance costs will be recovered, but no assumption of new policies to limit GHG emissions from existing plants, also yield cumulative retirements within a range of 34 to 70 gigawatts. Retirements of coal-fired capacity exceed the high end of the range (70 gigawatts) when a significant GHG policy is assumed (for further description of the cases and results, see "Issues in focus").

[...]

Key factors contributing to the shift away from coal are sustained low natural gas prices, higher coal prices, slow growth in electricity demand, and the implementation of Mercury and Air Toxics Standards (MATS) [69] and Cross-State Air Pollution Rule (CSAPR) [70]. These factors influence how existing plants are used, which plants are retired, and what types of new plants are built.

Brendan Gilfillan

----- Original Message ----- From: "Stut..."

06/22/2012 06:22:30 PM

From:

Brendan Gilfillan/DC/USEPA/US

To: "Alex Barron" <Barron.Alex@epamail.epa.gov>
Date: 06/22/2012 06:22 PM
Subject: Fw: EIA's Annual Energy Outlook

From: "Stutsman, Jen" [Jen.Stutsman@hq.doe.gov]
Sent: 06/21/2012 07:14 PM AST
To: Brendan Gilfillan
Subject: EIA's Annual Energy Outlook

Brendan –

Sorry again for not getting back to you earlier.

(b) (5) (DPP)



Thanks,
Jen

<http://uk.reuters.com/article/2012/01/24/us-carbon-idUKTRE80N0G220120124>

U.S. CO₂ emissions to stay below 2005 levels as coal use shrinks

Tue Jan 24, 2012 8:23am GMT

NEW YORK - U.S. energy-related CO₂ emissions will be 7 percent lower than their 2005 level of nearly 6 billion metric tons in 2020 as coal's share of electricity production continues a steady descent over the next two decades, according to new government data.

The Energy Information Administration (EIA) released an early version of its annual energy outlook on Monday, which predicted a slowdown in growth of energy use over the next two decades amid economic recovery and improved energy efficiency.

The report highlights the fact that carbon-intensive coal generation will see a major decline in the power sector in the coming decades, which will ensure energy-related CO₂ emissions will not exceed 2005 levels at any point before 2035.

The report also showed that emissions per capita would fall an average of 1 percent per year from 2005 to 2035 as the new federal standards, state renewable energy mandates and higher energy prices would temper the growth of demand for transportation fuels.

"Over the next 25 years, the projected coal share of overall electricity generation falls to 39 percent, well below the 49-percent share seen as recently as 2007, because of slow growth in electricity demand, continued competition from natural gas and renewable plants, and the need to comply with new environmental regulations," it said.

The retirement of old, inefficient coal-fired power plants will outpace new construction, and the report added that gas-fired plants - which are cheaper to build - will generate 13 percent more power in 2012 than they did last year.

Meanwhile, the share of electricity generation from renewable fuels is expected to grow from 10 percent in 2010 to 16 percent by 2035, according to the EIA.

TARGETS

The Obama Administration has set a target under the U.N. for the U.S. to reduce its greenhouse gas emissions 17 percent below 2005 levels by 2020.

Congress has not been able to pass comprehensive energy and climate change legislation that would help ensure the target is met, but the administration hopes a combination of federal regulations and state emission-reduction programs can achieve the cuts.

The report said that the U.S. will remain an importer of oil while it becomes for the first time a net exporter of natural gas within the next 25 years.

The agency cautioned that the results of the outlook may change when it publishes the final annual energy outlook in April this year.

(Reporting by [Valerie Volcovici](#))

Jen Stutsman
Press Secretary
Office of Public Affairs
U.S. Department of Energy
P: (202) 586-3261
C(b) (6)
jen.stutsman@hq.doe.gov

EPA-372

Alex Barron/DC/USEPA/US

07/27/2012 10:51 AM

To: Brendan Gilfillan

cc: "goo michael"

bcc:

Subject: Re: Fw: coal retirements including disucssion of reasons for retirements

It's amazing what low natural gas prices and low demand are doing to the coal fleet...

A

Brendan Gilfillan

----- Original Message -----

From: Brendan Gilfillan

Sent: 07/27/2012 10:47 AM EDT

To: Alisha Johnson

Cc: Arvin Ganesan; Bicky Corman; Bob Perciasepe; Bob Sussman; Diane Thompson; Gina McCarthy; James O'Hara; Laura Vaught; Michael Goo; Sarah Pallone; Alex Barron

Subject: Re: Fw: coal retirements including disucssion of reasons for retirements

This in particular is not very helpful:

Moreover, based on EIA data, the approximate 9 GW of coal-fired capacity retirements expected to occur in 2012 will likely be the largest one-year amount in the nation's history. The record is, however, expected to be short-lived as almost 10 GW of coal-fired capacity are expected to retire in 2015.

Alisha Johnson

All, Flagging EIA's report for you. We're...

07/27/2012 10:45:15 AM

From: Alisha Johnson/DC/USEPA/US

To: James O'Hara/DC/USEPA/US@EPA, Michael Goo/DC/USEPA/US@EPA, Bicky Corman/DC/USEPA/US@EPA, Bob Sussman/DC/USEPA/US@EPA, Bob Perciasepe/DC/USEPA/US@EPA, Diane Thompson/DC/USEPA/US@EPA, Gina McCarthy/DC/USEPA/US@EPA, Brendan Gilfillan/DC/USEPA/US@EPA, Arvin Ganesan/DC/USEPA/US@EPA, Laura Vaught/DC/USEPA/US@EPA, Sarah Pallone/DC/USEPA/US@EPA

Date: 07/27/2012 10:45 AM

Subject: Fw: coal retirements including disucssion of reasons for retirements

All,

Flagging EIA's report for you. We're working on a response. Let me know if you have input/questions.

----- Forwarded by Alisha Johnson/DC/USEPA/US on 07/27/2012 10:41 AM -----

From: "Stutsman, Jen" <Jen.Stutsman@hq.doe.gov>

To: Alisha Johnson/DC/USEPA/US@EPA

Date: 07/27/2012 10:14 AM

Subject: FW: coal retirements including disucssion of reasons for retirements

From: Sieminski, Adam (EIA)

Sent: Friday, July 27, 2012 8:32 AM

To: Stutsman, Jen

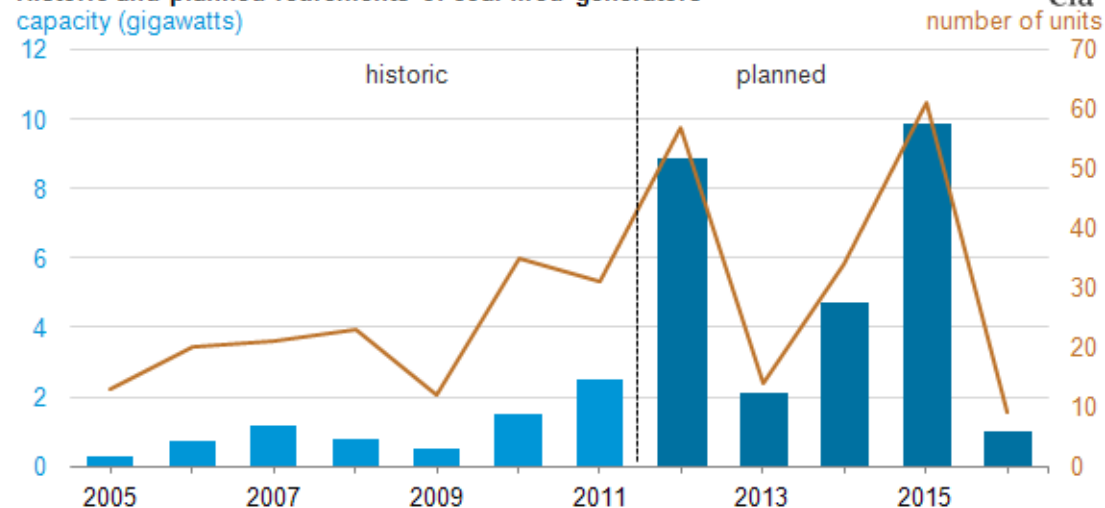
Subject: coal retirements including disucssion of reasons for retirements

Full article

http://www.eia.gov/dailyrpt/content/2012.07.27/DailyEnergyReport_Feature.cfm?DERdate=07/27/2012

27 gigawatts of coal-fired capacity to retire over next five years

Historic and planned retirements of coal-fired generators



Source: U.S. Energy Information Administration, [Form EIA-860, "Annual Electric Generator Report."](#)

Note: Data for 2005 through 2011 represent actual retirements. Data for 2012 through 2016 represent planned retirements, as reported to EIA. Data for 2011 through 2016 are early-release data and not fully vetted.

Plant owners and operators report to EIA that they expect to retire almost 27 gigawatts (GW) of capacity from 175 coal-fired generators between 2012 and 2016. In 2011, there were 1,387 coal-fired generators in the United States, totaling almost 318 GW. The 27 GW of retiring capacity amounts to 8.5% of total 2011 coal-fired capacity.

The coal-fired capacity expected to be retired over the next five years is more than four times greater than retirements performed during the preceding five-year period (6.5 GW). Moreover, based on EIA data, the approximate 9 GW of coal-fired capacity retirements expected to occur in 2012 will likely be the largest one-year amount in the nation's history. The record is, however, expected to be short-lived as almost 10 GW of coal-fired capacity are expected to retire in 2015.

These planned retirement values reflect the early release version of the 2011 reports by plant owners and operators on the [Form EIA-860, "Annual Electric Generator Report."](#) The data are subject to change and may not reflect all the retirements that companies are considering. Respondents to this survey include industrial and commercial generators, as well as those in the electric power sector.

	Existing Coal Capacity ¹	Reported coal generator retirements						
		Historical			Planned			
		2009	2010	2011	2012	2013	2014	2015
Total Net Summer Capacity (MW)	317,469	529	1,528	2,517	8,890	2,098	4,715	9,865
Number Of Units	1,387	12	35	31	57	14	34	61
Average Net Summer Capacity (MW)	228	44	44	81	156	150	139	162
Average Tested Heat Rate (Btu/kWh)	11,281	12,200	12,879	10,714	10,897	13,922	11,067	10,659
Average Age at Retirement	N/A	50	54	62	56	55	57	57

¹ Reflects all coal units that existed at year-end 2011.

Source: U.S. Energy Information Administration, [Form EIA-860, "Annual Electric Generator Report."](#)

Note: Data for 2009 through 2011 represent actual retirements. Data for 2012 through 2015 represent planned retirements, as

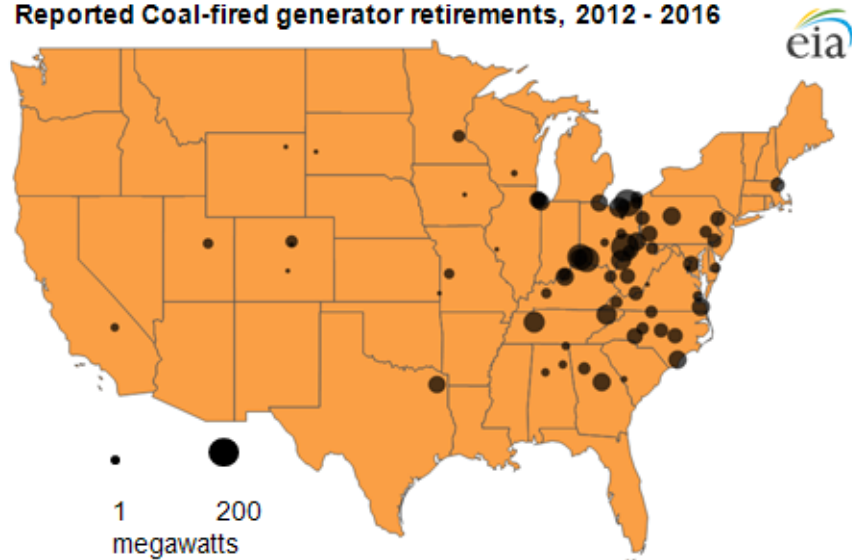
reported to EIA. Data for 2011 through 2015 are early-release data and not fully vetted.

The table above shows that the coal generators that retired between 2009 and 2011 had an average size of 59 megawatts (MW). By contrast, the average size of a coal-fired plant planned for retirement between 2012 and 2015 is 154 MW, more than twice the average size of the units retired during the 2009-2011 period. Twelve units of at least 200 MW are expected to retire in 2012, including two 790 MW units.

Another 13 coal-fired units with generating capacities of 200 MW or greater are expected to retire in 2015—this is close to the average size of all coal units existing in 2011 (228 MW).

The table also underscores that more efficient plants are planned for retirement. By 2015, the retiring coal-fired units will have average tested heat rates of about 10,700 British thermal units per kilowatt-hour; these coal-fired units are approximately 12% more efficient than the group of units, on average, that retired during 2009-2011, but 5% less efficient than the average coal unit.

Reported Coal-fired generator retirements, 2012 - 2016



Source: U.S. Energy Information Administration, [Form EIA-860, "Annual Electric Generator Report."](#)

Around the country, several factors are likely contributing to the increase in planned coal unit retirements:

- **Modest demand growth.** Slowing electricity demand growth has led to declining use of some of the smaller, older, less efficient coal plants.
- **Relative fuel prices.** [Relative prices](#) of natural gas and coal as sources of energy, which have moved in favor of natural gas with the boom in shale gas production. The variable costs of operating natural gas-fired capacity have fallen relative to those of coal-fired plants.
- **Availability of the combined-cycle plant fleet.** The availability of highly efficient natural gas combined-cycle power plants that are currently not fully utilized.
- **Aging coal-fired generators.** Most of the country's older coal capacity is concentrated in the Mid-Atlantic, Ohio River Valley, and Southeastern U.S (see map above) due to proximity to the primary U.S. [coal supply regions](#) at the time of their construction.
- **Environmental compliance costs.** The cost of compliance with anticipated and existing Federal environmental regulations such as the Mercury and Air Toxics Standards (MATS) is a factor. Particularly in the case of older, smaller units that are not used heavily, owners may conclude it is more cost efficient to retire plants rather than make additional investments.
- **Other compliance costs.** The cost of compliance with anticipated and existing state laws and regulations including renewable portfolio standards.

Principal Contributor: Vlad Dorjets, Office of Electric, Renewable, and Uranium Statistics

EPA-373

Michael Goo/DC/USEPA/US
07/27/2012 01:28 PM

To: Alex Barron, Al McGartland, DavidA Evans, Paul Balserak,
Barry Elman
cc
bcc
Subject: Fw: coal retirements including disucssion of reasons for
retirements

setting the statement aside I would be interested in thoughts on the underlying report
----- Forwarded by Michael Goo/DC/USEPA/US on 07/27/2012 01:27 PM -----

From: Alisha Johnson/DC/USEPA/US
To: Brendan Gilfillan/DC/USEPA/US@EPA, Arvin Ganesan/DC/USEPA/US@EPA, Bicky
Corman/DC/USEPA/US@EPA, Bob Perciasepe/DC/USEPA/US@EPA, Bob
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Vaught/DC/USEPA/US@EPA, Michael Goo/DC/USEPA/US@EPA, Sarah
Pallone/DC/USEPA/US@EPA, Alex Barron/DC/USEPA/US@EPA
Date: 07/27/2012 01:25 PM
Subject: Re: Fw: coal retirements including disucssion of reasons for retirements

Thank for your input. Let me know if any concerns with the statement below.

(b) (5) (DPP)

[Redacted content]

Brendan Gilfillan This in particular is not very helpful: ... 07/27/2012 10:47:28 AM

From: Brendan Gilfillan/DC/USEPA/US
To: Alisha Johnson/DC/USEPA/US@EPA
Cc: Arvin Ganesan/DC/USEPA/US@EPA, Bicky Corman/DC/USEPA/US@EPA, Bob
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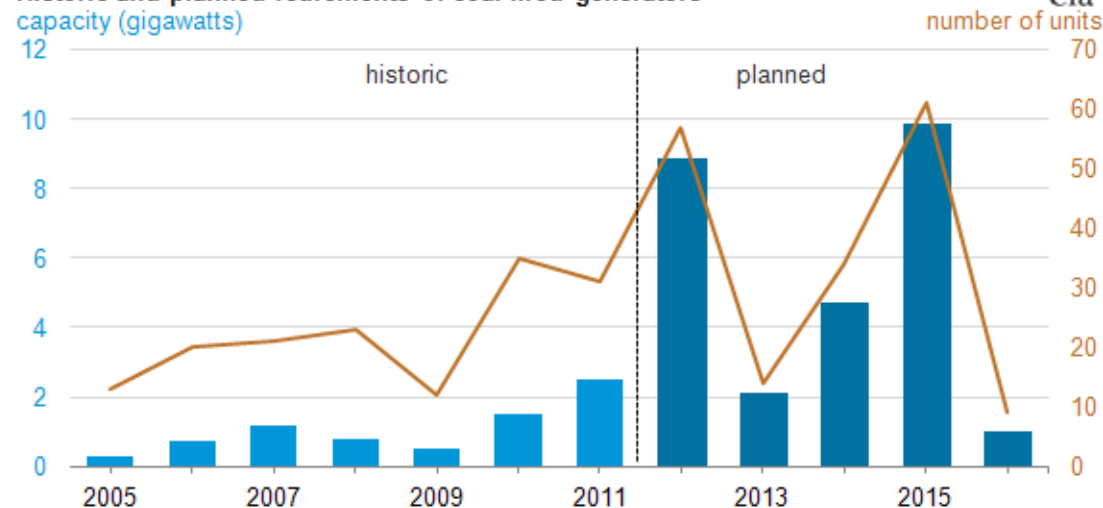
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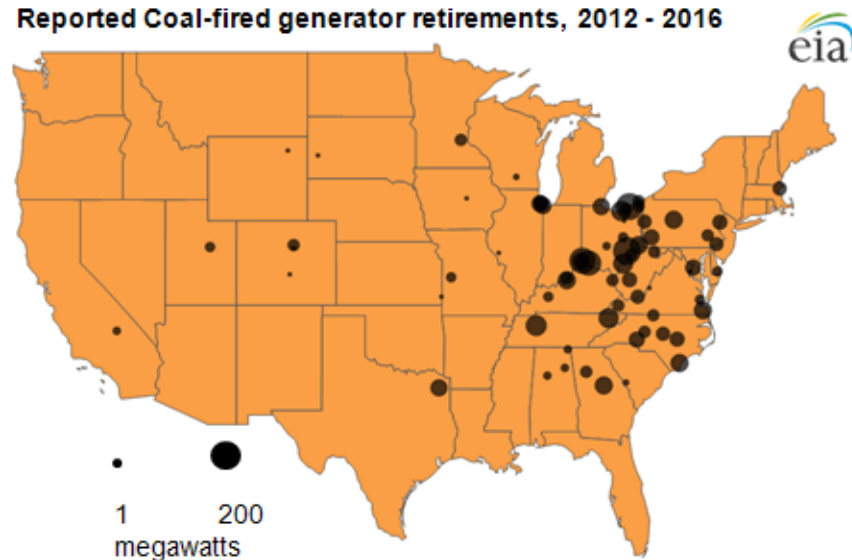
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Principal Contributor: Vlad Dorjets, Office of Electric, Renewable, and Uranium Statistics

EPA-374

Alex Barron/DC/USEPA/US

08/15/2012 05:50 PM

To Michael Goo

cc

bcc

Subject Fw: GAO Report - "EPA Regulations and Electricity: Better Monitoring by Agencies Could Strengthen Efforts to Address Potential Challenges"

FYI - Since you are spying on e-mail, this looks to come out tomorrow (or maybe Fri). I am working on TP's now.

Alex

----- Forwarded by Alex Barron/DC/USEPA/US on 08/15/2012 05:49 PM -----

From: Arvin Ganesan/DC/USEPA/US
To: Alex Barron/DC/USEPA/US@EPA
Cc: Laura Vaught/DC/USEPA/US@EPA
Date: 08/15/2012 02:00 PM
Subject: Fw: GAO Report - "EPA Regulations and Electricity: Better Monitoring by Agencies Could Strengthen Efforts to Address Potential Challenges"

Hi Alex,

So, I understand that this report is getting published tomorrow or Fri? Has there been any coordination with DOE on this? Also, do we have TP's for Comms?

thanks!

Arvin

----- Forwarded by Arvin Ganesan/DC/USEPA/US on 08/15/2012 01:58 PM -----

From: "Crowell, Brad" <Brad.Crowell@Hq.Doe.Gov>
To: Arvin Ganesan/DC/USEPA/US@EPA
Date: 08/15/2012 01:55 PM
Subject: FW: GAO Report - "EPA Regulations and Electricity: Better Monitoring by Agencies Could Strengthen Efforts to Address Potential Challenges"

Dude - can you call me on this? Or have whoever is taking the lead in your office call me? 586-3592

Brad Crowell
Principal Deputy Assistant Secretary
Congressional and Intergovernmental Affairs
United States Department of Energy
202-586-5450

----- Message from "Dallafior, Michelle" <Michelle.Dallafior@hq.doe.gov> on Fri, 10 Aug 2012 14:04:02 -0400 -----

To: "Crowell, Brad" <Brad.Crowell@Hq.Doe.Gov>, "Davis, Christopher" <Christopher.Davis@Hq.Doe.Gov>
cc: "Lane, Jeff" <laneje@Hq.Doe.Gov>, "Fickel, Louise" <Louise.Fickel@Hq.Doe.Gov>, "Mansueti, Lawrence" <Lawrence.Mansueti@hq.doe.gov>

Subject : GAO report

(b) (5) (DPP)



(b) (6) but I'm pretty sure Larry is in the office. I'll be in the office on Monday, 8/20.

Thanks!

Michelle Dallafior
Sr. Policy Advisor
Office of Electricity Delivery and Energy Reliability
202-586-1117



DR-GAO-12-635.pdf 361308 - DOE response 7.3.2012.pdf



EPA-DOE-FERC Pwr Sector Coordination draft 7-18-12.doc

WIF
Ex (b)(5) DPP